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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,187

03/17/2005

Byung-Woo Bae

P27593

6691

7055 7590 04/23/2009  
GREENBLUM & BERNSTEIN, P.L.C.  
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EXAMINER

SALZMAN, KOURTNEY R

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

04/23/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/528,187	<b>Applicant(s)</b> BAE ET AL.	
	<b>Examiner</b> KOURTNEY R. SALZMAN	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4-6 and 10 is/are allowed.
- 6) ☒ Claim(s) 3 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>January 26, 2009</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Summary***

1. The action is in response to the request for continued examination filed February 17, 2009.
2. Claims 1 and 3 are currently amended. Claims 2, 7 and 8 are currently cancelled. Claim 10 is new.
3. Claims 1, 3-6, 9 and 10 are currently pending and have been fully considered.

### ***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claim 3 and 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over BEATY et al(US 6,645,368), in view of NANKAI et al (US 5,120,420) and IKETAKI et al (US 6,576,117).

BEATY et al teaches a sensor and method of using the sensor which employs amplifiers and switches to measure biological material. The noninverting (+) terminal, or input of the operational amplifier connects to a power supply as stated in c. 8, l. 46-48. The inverting (–) terminal, or output of the operational amplifier connects to multiple switches or terminal (c. 8, l. 32-38) which output "DC excitation" "across the biosensor". (c. 8, l. 36-38) The microprocessor, or instrument 32 of BEATY et al, more specifically the microprocessor unit inside the instrument 54, is connected to the circuit of switches of 36, as shown in figure 2. The microprocessor is equipped to handle the calculations of concentrations

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of components with corrections (c. 8, l. 15-30) and extensive equations including those shown in column 9, line 35-column 10, line 10. BEATY et al describes the process of measuring concentrations using the apparatus described in column 10, lines 49. BEATY et al states the instrument 32 contains a display for the communication of a result in column 10, line 46-48. The amended portion of claim 3 carried no patentable weight as it is directed to the intended use for the apparatus. The way an apparatus is used is not patentable when the claim is directed to the apparatus itself.

While the microprocessor of BEATY et al is capable of calculating complicated functions, it does not explicitly state the use of the microprocessor to average readings from multiple electrodes or the use of multiple pulses.

NANKAI et al teaches the application of a current or voltage to a working electrode where the reading level is the concentration of the interest. (c. 5, l. 46-53) NANKAI et al teaches a biosensor comprising multiple measuring electrodes, shown in figure 13 as reference numbers 41-42, functioning as working electrodes. The concentrations read by the electrodes are averaged for a mean value. (c. 8, l. 42-45)

NANKAI et al fails to teach the use of applying the voltage current to the electrodes multiple times sequentially.

IKETAKI et al teaches a method for using an electrochemical sensor through application of voltage to an electrode twice consecutively, as shown in figure 1. As shown in figure 2, reference box 2, the output parameters of the sensor, or in the case of the instant application the parameters as measured as the average of the sensor reading is analyzed and can be reported without correction or as an off-value.

It would be obvious to one of ordinary skill in the art to use the analyzing apparatus of BEATY et al to perform the method disclosed by NANKAI et al and IKETAKI et al because BEATY et al recognizes that just the use of an appropriate biosensor is not enough for a completely accurate reading, but instead the combination of the electronic analysis method and the accurate sensor. (c. 5, l. 44-48) Also, BEATY et al uses simply the generic term biosensor, making it an obvious step to apply the electrical analysis disclosed to the biosensor as described by NANKAI et al and IKETAKI et al. At the time of invention, it would have been obvious to one of ordinary skill in the art to perform the readings of the two electrode system as disclosed in NANKAI et al, two times, as shown in IKETAKI et al because both apparatus use multiple either electrodes or runs to minimize error, in turn, providing a measurement with higher accuracy (NANKAI et al c.8, l. 42-45 and IKETAKI et al c. 3, l. 2-4)

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Regarding claim 9, NANKAI et al teaches in figure 7 the concentration corresponding to the current read as specific to the sensor. The response characteristic unique to each sensor is also discussed in column 5, lines 54-59. This functions as the memory of the sensor.

***Allowable Subject Matter***

6. Claims 1, 4-6 and 10 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose nor render obvious all the cumulative limitations of claim 1 with particular attention to "measuring a time interval from when an amount of current flowing in a first working electrode begins to be detected until a time when an amount of current flowing in a second working electrode begins to be detected". The closest prior art, including the previously applied art and NEEL et al (US 6,743,635) and IKEDA et al (US 6,340,428), fail to utilize this method to determine when the sample has contacted the electrode.

***Response to Arguments***

8. Applicant's arguments filed January 20, 2009 have been fully considered but they are not persuasive.

9. Regarding the amendment to claim 3, the newly added portion carries no patentable weight as it is directed to the intended method of use for the apparatus. The way an apparatus is used is not patentable when the claim is directed to the apparatus itself.

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10. The arguments presented are fully addressed in the Final Office Action sent on November 17, 2008.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KOURTNEY R. SALZMAN whose telephone number is (571)270-5117. The examiner can normally be reached on Monday to Thursday 6:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kaj K Olsen/  
Primary Examiner, Art Unit 1795

kr  
4/16/2009